



**United States
Department of
Agriculture**

**Agricultural
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Service**

**Fruit and
Vegetable
Division**

**Processed
Products
Branch**

United States Standards for Grades of Grape Juice

Effective date May 14, 1951

This is the second issue of the United States Standards for Grades of Canned Grape Juice published in the **FEDERAL REGISTER** of April 12, 1951, (16 FR 3209) to become effective May 14, 1951. This issue supersedes the first issue which has been in effect since June 15, 1945.

Voluntary U.S. grade standards are issued under the authority of the Agricultural Marketing Act of 1946, which provides for the development of official U.S. grades to designate different levels of quality. These grade standards are available for use by producers, suppliers, buyers, and consumers. As in the case of other standards for grades of processed fruits and vegetables, these standards are designed to facilitate orderly marketing by providing a convenient basis for buying and selling, for establishing quality control programs, and for determining loan values.

The standards also serve as a basis for the inspection and grading of commodities by the Federal inspection service, the only activity authorized to approve the designation of U.S. grades as referenced in the standards, as provided under the Agricultural Marketing Act of 1946. This service, available as on-line (in-plant) or lot inspection and grading of all processed fruit and vegetable products, is offered to interested parties, upon application, on a fee-for-service basis. The verification of some specific recommendations, requirements, or tolerances contained in the standards can be accomplished only by the use of on-line inspection procedures. In all instances, a grade can be assigned based on final product factors or characteristics.

In addition to the U.S. grade standards, grading manuals or instructions for inspection of several processed fruits and vegetables are available upon request for a nominal fee. These manuals or instructions contain detailed interpretations of the grade standards and provide step-by-step procedures for grading the product.

Grade standards are issued by the Department after careful consideration of all data and views submitted, and the Department welcomes suggestions which might aid in improving the standards in future revisions. Comments may be submitted to, and copies of standards and grading manuals obtained from:

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Authority:	Agricultural Marketing Act of 1946, Secs. 203, 205, 60 Stat. 1087, as amended, 1090, as amended (7 U.S.C. 1622, 1624).

Note: Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State laws and regulations.

§52.1341 Product description.

Canned grape juice is the unfermented liquid obtained from properly matured fresh grapes. Such grape juice is prepared without concentration, without dilution, is packed with or without the addition of sweetening ingredients, and is sufficiently processed by heat to assure preservation of the product in hermetically sealed containers (either metal or glass).

§52.1342 Types of canned grape juice.

- (a) **Type I:** Concord type (prepared from grapes of the slip-skin varieties of the Concord type of the Labrusca species).
- (b) **Type II:** Any type other than Concord type (prepared from a single variety of grapes other than Concord type).
- (c) **Type III:** Blended type (prepared from two or more varieties of grapes).

§52.1343 Styles of canned grape juice.

Unless specifically designated as **sweetened**, canned grape juice is considered as **unsweetened**.

- (a) **Style I**, Unsweetened (without added sweetening ingredient or ingredients).
- (b) **Style II**, Sweetened (with added sweetening ingredient or ingredients).

§52.1344 Grades of canned grape juice.

- (a) **U.S. Grade A** or **U.S. Fancy** is the quality of canned grape juice from which tartrate crystals have been removed; that possesses a good color; that is practically free from defects; that possesses a good flavor; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.
- (b) **U.S. Grade B** or **U.S. Choice** is the quality of canned grape juice from which tartrate crystals have been removed, that possesses a reasonably good color; that is reasonably free from defects; that possesses a reasonably good flavor; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.
- (c) **U.S. Grade D** or **Substandard** is the quality of canned grape juice that fails to meet the requirements of U.S. Grade B or U.S. Choice.

§52.1345 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be filled as full as practicable with grape juice and that the product occupy not less than 90 percent of the volume of the container.

§52.1346 Ascertaining the grade.

- (a) The grade of canned grape juice is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and flavor.
- (b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	40
Absence of defects	20
Flavor	<u>40</u>
Total Score	100

§52.1347 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, **17 to 20 points** means 17, 18, 19, or 20 points).

§52.1348 Color.

- (a) **"A" classification.** Canned grape juice that possesses a good color may be given a score of 34 to 40 points. **Good color** has the following meanings with respect to the types of canned grape juice:
 - (1) **Type I.** A bright purple or bright reddish-purple color typical of properly prepared and properly processed juice from Concord type grapes.

- (2) **Types II and III.** A bright color typical of properly prepared and properly processed juice characteristic of the varietal type or varietal types from which prepared.
- (b) **"B" classification.** If the canned grape juice possesses a reasonably good color, a score of 28 to 33 points may be given. Canned grape juice that falls into this classification shall not be graded above U.S. Grade B or U. S. Choice, regardless of the total score for the product (this is a limiting rule). **Reasonably good color** has the following meanings with respect to the types of canned grape juice:
- (1) **Type I:** A purple or reddish-purple color typical of canned grape juice prepared from Concord type grapes and which color may be slightly dull purple, slightly dull bluish-purple, or slightly dull reddish-purple but which is not off-color for any reason:
- (2) **Types II and III:** A color typical of canned grape juice characteristic of the varietal type or varietal types from which prepared and which color may be slightly dull but which is not off-color for any reason.
- (c) **"SStd" classification.** Canned grape juice that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§52.1349 Absence of defects.

- (a) **General.** The factor of absence of defects refers to the degree of freedom from sediment and other residue, from tartrate crystals, from particles of skin, from particles of pulp, from particles of seed, and from any other defects.
- (b) **"A" classification.** Canned grape juice that is practically free from defects may be given a score of 17 to 20 points. **Practically free from defects** means that the canned grape juice may possess a slight amount of sediment and residue of an amorphous nature; may possess not more than a trace of sediment and residue of a non-amorphous nature; is practically free from tartrate crystals; and is free from particles of skin, particles of pulp, particles of seed, and from any other defects.

- (c) **"B" classification.** If the canned grape juice is reasonably free from defects, a score of 14 to 16 points may be given. Canned grape juice that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). **Reasonably free from defects** means that the canned grape juice may possess a slight amount of sediment and residue of an amorphous or non-amorphous nature; may possess a slight amount of tartrate crystals; may possess not more than a trace of particles of skin, particles of pulp, particles of seed, and other defects.
- (d) **"SStd" classification.** Canned grape juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§52.1350 Flavor.

- (a) **"A" classification.** Canned grape juice that possesses a good flavor may be given a score of 34 to 40 points. **Good flavor** means that the flavor is a distinct and normal flavor, typical of well-matured grapes and that the canned grape juice is free from any trace of scorching, caramelization, and objectionable flavors and objectionable odors of any kind. To score in this classification, canned grape juice shall meet the following additional requirements:
- (1) **Brix:** Style I, unsweetened--not less than 15.0 degrees.
 - (2) **Brix:** Style II, sweetened--not less than 17.0 degrees.
 - (3) **Acid:** Not less than 0.60 gram per 100 mL nor more than 1.20 grams per 100 mL, calculated as tartaric acid.
 - (4) **Brix-acid ratio:** For both Style I, unsweetened, and Style II, sweetened, not less than 14 to 1 nor more than 28 to 1.

- (b) **"B" classification.** If the canned grape juice possesses a reasonably good flavor, a score of 28 to 33 points may be given. Canned grape juice that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). **Reasonably good flavor** means that the flavor is normal and typical of reasonably well-matured grapes and that the canned grape juice may be slightly astringent but is free from any trace of scorching, caramelization, and objectionable flavors and objectionable odors of any kind. To score in this classification, canned grape juice shall meet the following additional requirements:
- (1) **Brix:** Style I, unsweetened--not less than 14.0 degrees.
 - (2) **Brix:** Style II, sweetened--not less than 16.0 degrees.
 - (3) **Acid:** Not less than 0.45 gram per 100 mL nor more than 1.40 grams per 100 mL, calculated as tartaric acid.
 - (4) **Brix-acid ratio:** For both Style I, unsweetened, and Style II, sweetened, not less than 11.5 to 1.
- (c) **"SStd" classification.** Canned grape juice that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§52.1351 Explanation of terms.

- (a) **Brix** means the degrees Brix of canned grape juice when tested with a Brix hydrometer calibrated at 20 degrees C (68 degrees F). If canned grape juice is tested at a temperature other than 20 degrees C (68 degrees F), the applicable temperature correction shall be made to the reading of the scale as prescribed in **Official Methods of Analysis of the Association of Official Analytical Chemists**. The degrees Brix of canned grape juice may be determined by any other method which gives equivalent results.
- (b) **Acid** means grams of acid (calculated as tartaric acid) per 100 mL of juice in canned grape juice determined by titration with standard sodium hydroxide solution, using phenolphthalein as indicator or any other satisfactory indicator.

§52.1352 Ascertaining the grade of a lot.

The grade of a lot of canned grape juice covered by these standards is determined by the procedures set forth in the **Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products** (7 CFR 52.1 through 52.83).

§52.1353 Score sheet for canned grape juice.

Number, size and kind of container			
Container marks or identification			
Label			
Liquid measure (Fl ounces)			
Vacuum (inches)			
Type			
Style			
Brix (degrees)			
Acid (tartaric: grams/100 mL)			
Brix-acid ratio			
Factors		Score points	
Color	40	(A)	34-40
		(B)	28-33 <u>1/</u>
		(D)	0-27 <u>1/</u>
Absence of defects	20	(A)	17-20
		(B)	14-16 <u>1/</u>
		(D)	0-13 <u>1/</u>
Flavor	<u>40</u>	(A)	38-40
		(B)	28-33 <u>1/</u>
		(D)	0-27 <u>1/</u>
Total score	100		
U.S. Grade			

1/ Indicates limiting rule.

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